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| EXAMINER | |
|---|---|
| ADESANYA, OLUJIMI A | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2626 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

efspatents@sommerbarnard.com

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/579,377 | SCHLEPPENBACH ET AL. | |
| | Examiner | Art Unit | |
| | OLUJIMI A. ADESANYA | 2626 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *13 October 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) *6* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 7-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### *Response to Arguments*

2. Applicant's arguments with respect to **claims 1-5 and 7-14** have been considered but are moot in view of the new ground(s) of rejection. Prior Claim and Specification objections are hereby withdrawn.

### *Claim Rejections - 35 USC § 103*

1. **Claims 1-4, 7, 10-14 and 19-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Raman et al US 5,572,625 ("Raman") in view of Miller ("MATHSPEAK from Abe Nemeth") ("Miller")

As to **claim 1**, Raman discloses a method of communicating a technical notation to a user, the method comprising the steps of:

converting the notation into data (mathematical expressions, Abstract, col. 4, In 23-24), inputting the data into a processor to produce inputted data for processing (recognizer, col 4, In 22-38), said processing including using a lexicon to convert the inputted data into outputted data (lexical analyzer, col 4, In 22-38),

and outputting the outputted data into a format decipherable by the user (audio output, col 4, In 22-38; col. 1, In 13-21).

Raman does not explicitly the lexicon including reserved words, each of the reserved words preceding a respective data element and independently indicating a level of the respective data element within a hierarchy of subscripts and superscripts relative to a base level

However, this feature is well known as is evidenced by Miller who teaches:

the lexicon including reserved words, each of the reserved words preceding a respective data element and independently indicating a level of the respective data element within a hierarchy of subscripts and superscripts relative to a base level (subscripts and superscripts, “x sup 2”, return to the base level, “e sup x sup-sub I plus j”, pg 5, subscripts and superscripts as reserved words, subscript and superscript indicating the level of the data (x sup 2 as representation of $x^2$) relative to the base level of data element x)

At the time of the invention, it would have been obvious to one of ordinary skill in the art to implement reserved words, each of the reserved words preceding a respective data element and independently indicating a level of the respective data element within a hierarchy of subscripts and superscripts relative to a base level in Raman’s lexicon, so as to indicate current level and change in level within the data (Miller, pg 4)

As to **claim 2**, Raman in view of Miller disclose the method of claim 1,

Raman discloses wherein at least one code selected from a code group comprising LATEX, XML, and SGML is used during said converting step (Abstract).

As to **claim 3**, Raman in view of Miller disclose the method of claim 1,

Raman discloses wherein the notation is from a digital file selected from a format group comprising a text file, a Microsoft Word file (word processors, col. 3, In 7-10), an Adobe Acrobat file, an HTML document, an XML document, an xHTML document, a Quark Express document, a Word Perfect document, an SGML document, and an Adobe PageMaker document that is converted through use of said converting step.

As to **claim 4**, Raman in view of Miller disclose the method of claim 1,

Raman discloses wherein the notation is a printed page that is converted through use of said converting step (col. 3, In 52-64).

As to **claim 7**, Raman in view of Miller disclose the method of claim 1,

Raman discloses wherein said outputting step includes configuring the outputted data into a format decipherable by the user having print disabilities (Abstract, claim 1).

As to **claim 10**, Raman in view of Miller disclose the method of claim 1,

Raman discloses wherein said outputting step generates a visual output stream for display as an image (Abstract, col. 23, In 22-24).

As to **claim 11**, Raman in view of Miller disclose the method of claim 10,

Raman discloses wherein the visual output stream is directed to at least one from an output stream group comprising a web browser and a document (visual browsing, document, col. 32, In 35 - col. 33, In 27).

As to **claim 12**, Raman in view of Miller disclose the method of claim 1,

Raman discloses wherein an audio output stream is generated through use of said outputting step (Abstract).

As to **claim 13**, Raman in view of Miller disclose the method of claim 12,

Raman discloses wherein said outputting step utilizes a text-to-speech converter (Synthesizer, Abstract).

As to **claim 14**, Raman in view of Miller disclose the method of claim 1,

Raman discloses wherein said outputting step generates a text output stream (col. 2, ln 65 - col. 3 ln 5)

As to **claim 19**, Raman in view of Miller disclose the method of claim 12,

Raman discloses wherein the audio output stream includes at least one of stereo, pitch change, and different voices to convey differences in content or context (stereo, col. 15, ln 9-20; claim 1).

As to **claim 20**, Raman in view of Miller disclose the method of claim 1

Raman does not explicitly disclose wherein the reserved words are each comprised of "script" preceded by a combination of one or more of "sub" and "super".

However, this feature is well known as is evidenced by Miller who teaches:

the reserved words are each comprised of "script" preceded by a combination of one or more of "sub" and "super" (superscript, subscript, pg 5)

At the time of the invention, it would have been obvious to one of ordinary skill in the art to implement reserved words, wherein the reserved words are each comprised of "script" preceded by a combination of one or more of "sub" and "super", so as to indicate the position of the data (Miller, pg 5)

As to **claim 21**, Raman in view of Miller disclose the method of claim 1

Raman does not explicitly disclose wherein the use of the lexicon enables the user to deduce the level of the respective data element without waiting for a subsequent

context cue.

However, this feature is well known as is evidenced by Miller who suggests: wherein the use of the lexicon enables the user to deduce the level of the respective data element without waiting for a subsequent context cue (new level, change in level, pg 4, since Miller discloses introducing subscripts and superscripts into the data notation when a new level is encountered and when a level change occurs, this suggests enabling enables the user to deduce the level of the respective data element without waiting for a subsequent context cue)

At the time of the invention, it would have been obvious to one of ordinary skill in the art to implement the lexicon wherein the use of the lexicon enables the user to deduce the level of the respective data element without waiting for a subsequent context cue, so as to indicate the position of the data and help to effectively describe the notation (Miller, pg 5)

2. **Claims 5 and 8-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Raman in view of Kanevsky et al US 6,665,642 B2 ("Kanevsky"- '892).

As to **claim 5**, Raman in view of Miller disclose the method of claim 1,

Raman does not explicitly disclose wherein the notation is an audio source that is converted through use of said converting step.

However, this feature is well known as is evidenced by Kanevsky who teaches:

wherein the notation is an audio source (col 13, In 5-18).

At the time of the invention, it would have been obvious to one of ordinary skill in the

art to utilize a system wherein the notation is an audio source that is converted through use of said converting step so as to provide output to hearing- impaired user (Kanevsky, col 13, In 5-18)

As to **claim 8**, Raman in view of Miller disclose the method of claim 1, wherein said outputting step includes generating a Braille output stream.

Raman does not explicitly discloses wherein said outputting step includes generating a Braille output stream

However, this feature is well known as is evidenced by Kanevsky who teaches: wherein said outputting step includes generating a Braille output stream

At the time of the invention, it would have been obvious to one of ordinary skill in the art to utilize a system wherein said outputting step includes generating a Braille output stream so as to provide output to a blind or seeing-impaired user (Kanevsky, col. 7, In 60-63)

As to **claim 9**, Raman in view of Miller and Kanevsky disclose the method of claim 8,

Raman does not explicitly discloses wherein the Braille output stream produced through the use of said outputting step is in an output group comprising a display, a web site, a Braille display, and a Braille-printed page

However, this feature is well known as is evidenced by Kanevsky who teaches:

wherein the Braille output stream produced through the use of said outputting step is in an output group comprising a display, a web site, a Braille display, and a Braille-printed page (col. 7, In 56-63)

At the time of the invention, it would have been obvious to one of ordinary skill in the

art to utilize a system wherein the Braille output stream produced through the use of said outputting step is in an output group comprising a display, a web site, a Braille display, and a Braille-printed page so as to provide output to a blind or seeing-impaired user (Kanevsky, col. 7, In 60-63).

3. **Claims 15-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Raman in view of Miller as applied to **claim 12**, and further in view of Raman et al ("Audio Formatting-presenting structured information aurally") ("Raman2")

As to **claim 15**, Raman in view of Miller disclose the method of claim 12

Raman in view of Miller does not explicitly disclose wherein the audio output stream includes a first voice for content and a second voice for the reserved words.

However this feature is well known as is suggested by **Raman2** who suggests:

wherein the audio output stream includes a first voice for content and a second voice for the reserved words (spoken, customized to read superscripts….higher pitched voice, Introduction, par. 2; male, female, sec 2.1, a high pitched voice suggests a female speaker).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to utilize a wherein the audio output stream includes a first voice for content and a second voice for the reserved words, so as to signify a change in the output (changing fonts…,Raman2, sec 2.1).

As to **claim 16**, Raman in view of Miller disclose the method of claim 12

Raman in view of Miller does not explicitly disclose wherein the audio output stream includes a male voice for content and a female voice for the reserved words.

However this feature is well known as is suggested by **Raman2** who suggests:

wherein the audio output stream includes a male voice for content and a female voice for the reserved words (spoken, customized to read superscripts….higher pitched voice, Introduction, par. 2; male, female, sec 2.1, a high pitched voice suggests a female speaker).

4. **Claims 17-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Raman in view of Chaney et al US 6,104,990 ("Chaney")

As to **claim 17**, Raman in view of Miller disclose the method of claim 12 and a voice synthesizer for outputting the analyzed text

Raman does not explicitly disclose wherein the audio output stream is settable to different levels of verbosity.

However this feature is well known as is evidenced by Chaney who teaches:

setting different levels of verbosity (col. 7, ln 14-20)

At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Raman's teaching by setting different levels of verbosity in the audio output produced from the analyzed text, so as to control the amount of text provided to the user (Chaney, col. 6, ln 56-60))

As to **claim 18**, Raman in view of Miller and Chaney disclose the method of claim 17

Raman does not explicitly disclose further setting the level of verbosity of the audio output stream dependent upon how much information a reader requires or desires.

However this feature is well known as is evidenced by Chaney who teaches:

setting different levels of verbosity according to a user selected range or target (col. 7, ln 14-20)

At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Raman's teaching by setting different levels of verbosity in the audio output produced from the analyzed text based on how much information a reader/User requires or desires, so as to control the amount of text provided to the user (Chaney, col. 6, ln 56-60))

## ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLUJIMI A. ADESANYA whose telephone number is 571-270-3307. The examiner can normally be reached on Monday-Friday 7.30a.m - 5.00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RICHEMOND DORVIL can be reached on 571-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/OLUJIMI A ADESANYA/

Examiner, Art Unit 2626
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